

LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

**OFFICE OF FISHERIES
INLAND FISHERIES DIVISION**

AQUATIC VEGETATION CONTROL PLAN

CANE RIVER LAKE



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District 10
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CANE RIVER LAKE

Natchitoches Parish

1. Waterbody type – Abandoned river course of the Red River.
2. Age and condition of control structure (if applicable) – Originally impounded in 1936 by earthen dams at upper and lower end of lake. A 94' long concrete spillway was later built in 1946 at the south end of the lake.
3. Type of control structure – Concrete spillway with two 6 ft. X 6 ft. gates to permit water drawdown.
4. Water level range (MSL). Pool stage 98 MSL. High – 98 MSL. Low – 93.5 MSL.
5. Surface area range – Pool stage - 1,350 acres. High – 1,350 acres. Low – Unable to obtain this information
6. Average depth – At pool stage 8.9 ft. Depth ranges from 3 feet on the north end to 22 feet on the south end
7. Watershed ratio – 16.1:1
8. Drawdown potential of structure – The control structure is limited to a drawdown potential of 4.5 feet below pool stage due to the presence of a soil barricade outside of the structure
9. Waterbody Board or Lake Commission – Cane River Waterway Commission, a five member commission
 - a. Creation / Nomination – The Cane River Waterway Commission was created by state statute through Acts 1982, No. 391, R. S. 34:3261. Members are appointed by the Governor of Louisiana
 - b. Primary contact information - Cane River Waterway Commission, 1679 Hwy 493 Natchitoches, LA 71457. Telephone - (318) 379-2878
 - c. Procedure for spillway openings – Operation of the spillway gates is under the control of the Cane River Waterway Commission. Recommendations for drawdowns from LDWF should be presented to that body

LDWF files show no record of Cane River Lake drawdowns.

10. What significant stakeholders use the lake?
The lake is used for recreational boating and water sports as well as recreational fishing.
11. What are their needs and concerns?
Shoreline property owners value the lake for aesthetic purposes. Agricultural irrigation pumps are commonly found along the shoreline however, no official number of pumps is presently known. No record is found of potable water intakes. A U. S. Fish & Wildlife Service fish hatchery is located on the lake. Anglers and boaters require sufficient

boating access to the lake, i.e. water levels that allow boat launching and operation. Shoreline property owners desire adequate water levels to maintain the appearance of a “full” lake. Agricultural users require sufficient water for irrigation purposes. The federal fish hatchery requires that water be available for uptake as needed.

12. Have there been any controversial issues on the lake?

A proposal by the Cane River Waterway Commission to divert water from the Red River into Cane River Lake is currently being considered. The overall objective of this effort would be to keep Cane River at or near pool stage. Public meetings on the proposal have been conducted and a consulting firm has been retained. The outcome of this issue remains undecided at this time.

Aquatic Vegetation Status:

On January 1, 2013, coverage areas of the following plants were estimated:

Hydrilla (*Hydrilla verticillata*) – 125 acres
Coontail (*Ceratophyllum demersum*) 75 acres
Fanwort (*Cabomba caroliniana*) – 20 acres
Spatterdock (*Nuphar luteum*) – 30 acres
Water hyacinth (*Eichhornia crassipes*) – 20 acres

Limitations:

- Some limitations exist for plant control measures at Cane River Lake as noted below. The majority of limitations listed are based upon water level, specifically the maintenance of a sufficient level (near pool stage) to satisfy user groups and maintenance of water quality.

No significant physical or water quality limitations on control measures exist at Cane River Lake. Regulatory and public factors include:

1. Herbicide treatments should be coordinated with the Cane River Waterway Commission to avoid potential conflicts concerning post treatment water usage.
2. Shoreline development – Significant shoreline development is in place in the form of residences. Several historic sites are located along the lake including plantation homes and Fort St. Jean Baptiste.
3. Tourism - Cane River Lake serves as a focal point for tourism in Natchitoches Parish. The lake is the center piece of the downtown area of the city of Natchitoches. The downtown area of the lake is the site of an annual fireworks show staged during the Christmas season.
4. Fishing/boating – Anglers and boaters support plant control measures but desire water levels and water quality to remain high.
5. Fish Hatchery - Chemical treatment plans must consider water chemistry near the Natchitoches Federal Fish Hatchery. Drawdown recommendations must consider water supply needs of the hatchery.

6. Cane River Lake is located in Natchitoches Parish which is within the Louisiana Department of Agriculture's 2,4-D waiver requirement area. A waiver from LDAF is required prior to application of 2,4-D between March 15 and September 15 each year.
7. Agriculture/Horticulture - Chemical treatment plans must consider water chemistry near irrigation water intakes.

Past Control Measures –

LDWF has made limited herbicide applications at Cane River Lake in past years. Details regarding acres treated and vegetation types targeted over the past eight years appear in Table 1.

Table 1. Cane River Lake herbicide applications 2005 -2012.

Year	Acres Treated	Vegetation
2005	10	Water Hyacinth, Water Lily
2006	38	Water Hyacinth, Water Lily
2007	136	Water Hyacinth, Alligator Weed
2008	37	Water Hyacinth, Spadderdock, Alligator Weed, American Lotus
2009	104	Water Hyacinth, Water Lily, Common Salvinia
2010	130	Coontail, Spadderdock, Water Hyacinth
2011	61	Hydrilla
2012	13	Water Hyacinth, Alligator Weed, Cutgrass, Spadderdock

Historically, water hyacinth, water lily, and American lotus have been treated with foliar applications of 2,4-D at a rate of 0.5 gallons per acre. Common salvinia has been treated with foliar applications of diquat at a rate of 0.75 gallons per acre. Alligator weed has been treated with foliar applications of glyphosate at a rate of 0.75 gallons per acre.

In 2010, LDWF cooperated with the Cane River Waterway Commission to treat 63 acres of coontail (*Ceratophyllum demersum*) and spadderdock (*Nuphar luteum*) in the upper end of the lake with Aquathol K at a rate of 10 gallons per surface acre. The treatment method used was injection of liquid Aquathol K. The herbicide was provided by the commission and applied by LDWF. A map of the treated area appears in Figure 1.

In 2011, LDWF cooperated with the Cane River Waterway Commission to treat 60.6 acres of hydrilla (*Hydrilla verticillata*) in the lower end of Cane River Lake. The treatment method used was injection of liquid Aquathol K at a rate of 15 gallons per surface acre. The herbicide was provided by the commission and applied by LDWF. A map of the treated area appears in Figure 1.

No changes in aquatic plant control efforts have been made recently and none are planned. The control measures currently in place are meeting the needs of this waterbody.

Recommendations:

Simply stated, the aquatic plant control recommendation for Cane River Lake is a continuation of past practices. The Cane River Waterway Commission closely monitors this waterbody and communicates well with LDWF when problems arise. It has not yet been necessary for LDWF to aggressively monitor plant coverage on this lake.

The commission historically has purchased herbicides needed for large-scale treatments and LDWF has cooperated with the commission by serving in an advisory role as well as providing labor and equipment for large-scale treatments. LDWF has typically provided personnel, equipment and chemicals for spot treatments in response to requests from the commission.

LDWF will continue to maintain a good line of communication with the Cane River Waterway Commission with regard to aquatic plants on this lake. Additionally, LDWF staff will make observations of aquatic plant coverage during routine fisheries sampling on the lake. LDWF will respond appropriately with spot treatments of foliar herbicides as a first line of action for the treatment of floating and emergent vegetation upon requests for assistance made by the Cane River Waterway Commission. Control of emergent vegetation should be achieved by foliar application of glyphosate at a rate of 0.75 gallons per surface acre. *Salvinia* spp. should be treated with glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) with Aqua King Plus (0.25 gal/acre) and Thoroughbred (8 oz/acre) from April 1 to October 31 if found in the lake. Outside of that time frame, diquat (0.75 gal per acre) will be used. All foliar applications should include a surfactant at 0.25 gallons per acre submerged aquatic vegetation will be controlled in response to requests from the commission. Limited herbicide treatments for submerged aquatic vegetation will be considered in the proximity of boating access points. Treatments could include endothall at 2 ppm.

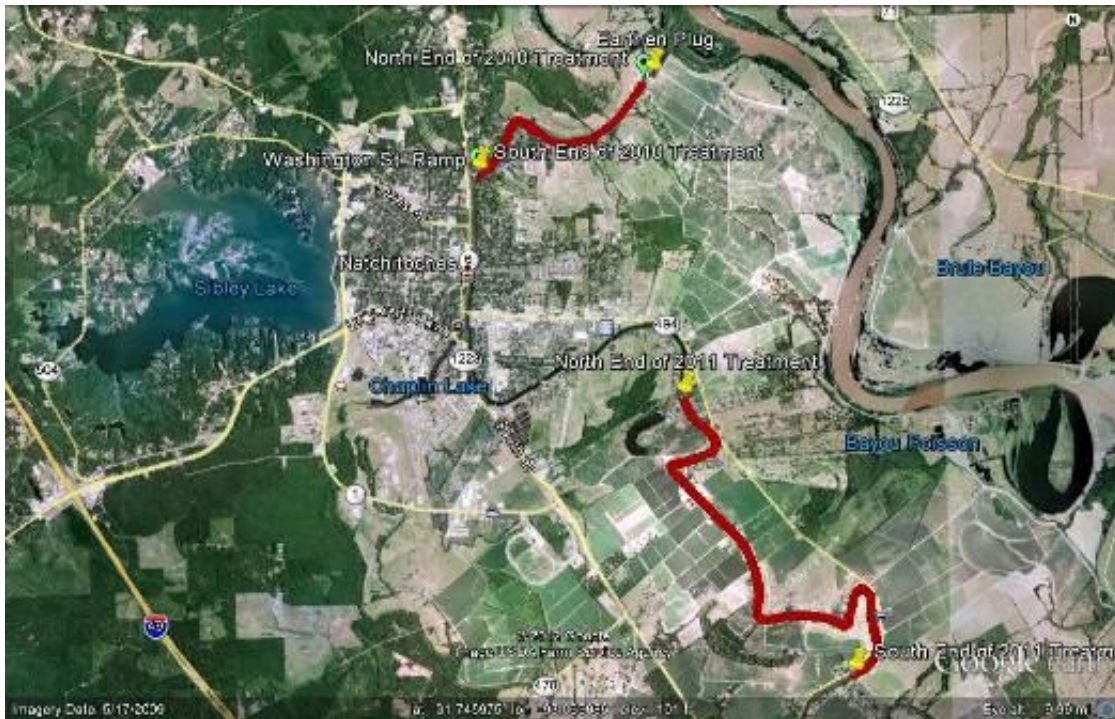


Figure 1 Cane River Lake Chemical Treatments 2020- 2011.

Typemap

To date, no typemap has been developed for Cane River Lake. Currently, no typemap is planned.